



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,560	10/08/2003	Tun-Hsing Liu	MTKP0041USA	2559
27765 7590 12/19/2006 NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			EXAMINER TECKLU, ISAAC TUKU	
			ART UNIT	PAPER NUMBER
			2192	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/19/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/605,560

Applicant(s)

LIU ET AL.

Examiner

Isaac T. Tecklu

Art Unit

2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/27/05.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. This action is responsive to the application filed on 10/08/2003.
2. Claims 1- 34 have been examined.

#### *Oath/Declaration*

3. The office acknowledges receipt of a properly signed oath/declaration filed on 10/08/2003.

#### *Claim Rejections - 35 USC § 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. Claims 1-34 are rejected under 35 U.S.C. 102(a) as being anticipated by Howe et al. (US 6,446,199 B1), hereinafter Howe.

Per claim 1, Howe discloses a method for refreshing at least a program code in an electronic system (e.g. FIG. 3 and related text), the electronic system comprising a host device and a peripheral device (e.g. FIG. 2A and related text), the peripheral device comprising:

a control circuit for executing a first program code (col. 3: 24-30 "... firmware ... first portion that is resident in flash ROM 53 of FIG. 2A) to control operations of the peripheral device according to an instruction from the host device (e.g. FIG. 2A, element 53 and 45 and related text and col. 1: 23-30 "... code that is must be continuously available and accessible ... control circuitry ..."); the method comprising:

accessing a second program code (col. 3: 55-65 "... firmware second portion, stored on and regularly accessed ..."); and

executing an inspection step in the host device before the second program code replaces the first program code of the peripheral device to utilize the host device (e.g. FIG. 3, "REPLACE INCOMPATIBLE FLASH ROM FIRMWARE FROM DISK MEDIA ROM FIRMWARE COPY" and related text and in abstract, lines 18-22 "... replaced by firmware first portion stored ...") to check whether partial content of the second program code conforms to a predetermined content (e.g. FIG. 3, "COMPATIBLE ?" and related text).

Per claim 2, Howe discloses the method of claim 1 wherein the peripheral device further comprises a storage memory for non-volatilely storing the first program code (e.g. FIG. 3, "READ ROM CODE" and related text); when the first program code is replaced by the second program code (e.g. FIG. 3, "REPLACE INCOMPATIBLE FLASH ROM FIRMWARE FROM DISK MEDIA ROM FIRMWARE COPY" and related text), the first program code is erased from the storage memory, and the second program code is recorded into the storage memory (col. 4: 14-20 "... by erasing EEPROM ... and reprogramming using ..." and col. 3: 55-65 "... compatible with the firmware second portion, stored on ...").

Per claim 3, Howe discloses the method of claim 1 wherein when executing the inspection step in the host device before the second program code replaces the first program code (e.g. FIG. 3, "COMPARE ROM CODE TO RAM CODE" and related text), the inspection step is proceeded before the control circuit executes the second program code to control operations of the peripheral device (e.g. FIG. 3, "REPLACE INCOMPATIBLE ..." and related text).

Per claim 4, Howe discloses the method of claim 1 wherein the predetermined content is partial content of the first program code or a constant recorded in the first program code (col. 3: 55-65 "... compatible with the firmware second portion, stored on ...") and executing the inspection step in the host device comprises checking whether the second program code includes partial content of the first program code (e.g. FIG. 3, "REPLACE INCOMPATIBLE ..." and related text), or whether the constant recorded in the second program code is equal to the constant in the first program code, or whether the constant recorded in the second program

code conforms to a predetermined range of the constant in the first program code (e.g. FIG. 2A, element 54 and related text).

Per claim 5, Howe discloses the method of claim 1 wherein the predetermined content is a fixed content so that the predetermined content cannot be changed (e.g. FIG. 2A, element 53 and related text) when the second program code is changed (col. 3: 25-29 "... second part that is stored on the reserved area of the disk ...").

Per claim 6, Howe discloses the method of claim 1 wherein when executing the inspection step in the host device, the host device will access partial content in a predetermined address in the second program code to check whether the partial content conforms to the predetermined content (e.g. FIG. 3, "REPLACE INCOMPATIBLE ..." and related text), or to search if the predetermined content exists in the second program code (e.g. FIG. 2A and related text).

Per claim 7, Howe discloses the method of claim 1 further comprising erasing to replace the first program code with the second program code after executing the inspection step in the host device if partial content of the second program code does not conform to the predetermined content (col. 4: 14-20 "... by erasing EEPROM ... and reprogramming using ..." and col. 3: 55-65 "... compatible with the firmware second portion , stored on ...").

Per claim 8, Howe discloses the method of claim 1 further comprising replacing the first program code with the second program code (col. 4: 14-20 "... by erasing EEPROM ... and reprogramming using ..." and col. 3: 55-65 "... compatible with the firmware second portion , stored on ...") after executing the inspection step in the host device so that the control circuit can execute the second program code to control operations of the peripheral device if partial content of the second program code conforms to the predetermined content (e.g. FIG. 3, "REPLACE INCOMPATIBLE ..." and related text).

Art Unit: 2192

Per claim 9, Howe discloses a method for refreshing at least a program code in an electronic system, the electronic system comprising a host device and a peripheral device, the peripheral device (e.g. FIG. 2A and related text) comprising:

a control circuit for executing a first program code to control operations of the peripheral device (col. 3: 24-30 "... firmware ... first portion that is resident in flash ROM 53 of FIG. 2A); the method comprising:

transmitting a second program code from the host device to the peripheral device; and executing a device inspection step, before the second program code replaces the first program code of the peripheral device (e.g. FIG. 2A, element 53 and 45 and related text and col. 1: 23-30 "... code that is must be continuously available and accessible ... control circuitry ..."), to utilize the control circuit to check whether partial content of the second program code conforms to a predetermined content (e.g. FIG. 3, "COMPATIBLE ?" and related text).

Per claim 10, Howe discloses the method of claim 9 wherein the peripheral device further comprises a storage memory for non-volatilely storing the first program code (e.g. FIG. 3, "READ ROM CODE" and related text); when the first program code is replaced by the second program code, the first program code is erased from the storage memory (e.g. FIG. 3, "REPLACE INCOMPATIBLE FLASH ROM FIRMWARE FROM DISK MEDIA ROM FIRMWARE COPY " and related text), and the second program code is recorded into the storage memory (col. 4: 14-20 "... by erasing EEPROM ... and reprogramming using ..." and col. 3: 55-65 "... compatible with the firmware second portion , stored on ...").

Per claim 11, Howe discloses the method of claim 9 wherein when executing the device inspection step before the second program code replaces the first program code (e.g. FIG. 3, "COMPARE ROM CODE TO RAM CODE " and related text), the device inspection step precedes the control circuit executing the second program code to control operations of the peripheral device (e.g. FIG. 3, "REPLACE INCOMPATIBLE ..." and related text).

Per claim 12, Howe discloses the method of claim 9 wherein the predetermined content is partial content of the first program code, or a constant recorded in the first program code (col. 3:

55-65 "... compatible with the firmware second portion, stored on ...") and executing the device inspection step comprises checking whether the second program code includes partial content of the first program code, or checking whether the constant recorded in the second program code is equal to the constant in the first program code, or checking whether the constant recorded in the second program code conforms to a predetermined range of the constant in the first program code (e.g. FIG. 2A, element 54 and related text).

Per claim 13, Howe discloses the method of claim 9 wherein the predetermined content is a fixed content so that the predetermined content cannot be changed (e.g. FIG. 2A, element 53 and related text) when the first program code is replaced by the second program code (col. 3: 25-29 "... second part that is stored on the reserved area of the disk ...").

Per claim 14, Howe discloses the method of claim 9 wherein when executing the device inspection step, the control circuit accesses partial content in a predetermined address in the second program code (e.g. FIG. 3, "REPLACE INCOMPATIBLE ..." and related text) to check whether the partial content conforms to the predetermined content, or to search if the predetermined content exists in the second program code (e.g. FIG. 2A and related text).

Per claim 15, Howe discloses the method of claim 9 further comprising ceasing to replace the first program code with the second program code after executing the device inspection step if partial content of the second program code does not conform to the predetermined content (col. 4: 14-20 "... by erasing EEPROM ... and reprogramming using ..." and col. 3: 55-65 "... compatible with the firmware second portion, stored on ...").

Per claim 16, Howe discloses the method of claim 9 further comprising replacing the first program code with the second program code (col. 4: 14-20 "... by erasing EEPROM ... and reprogramming using ..." and col. 3: 55-65 "... compatible with the firmware second portion, stored on ...") after executing the device inspection step so that the control circuit can execute the second program code to control operations of the peripheral device if partial content of the

second program code conforms to the predetermined content (e.g. FIG. 3, "REPLACE INCOMPATIBLE ..." and related text).

Per claim 17, Howe discloses the method of claim 9 wherein the peripheral device further comprises a buffer for volatily storing data (e.g. FIG. 3, "READ ROM CODE" and related text); when executing the device inspection step, the control circuit temporally stores the second program code into the buffer to access partial content of the second program code and to proceed with the device inspection step (e.g. FIG. 3, "REPLACE INCOMPATIBLE FLASH ROM FIRMWARE FROM DISK MEDIA ROM FIRMWARE COPY " and related text).

Per claim 18, Howe discloses the method of claim 17 wherein the peripheral device further comprises a non-volatile storage memory for non-volatily storing the first program code (e.g. FIG. 3, "READ ROM CODE" and related text); when executing the device inspection step before the first program code is replaced by the second program code, the device inspection step precedes the first program code being erased and the second program code being recorded in the non-volatile storage memory (e.g. FIG. 3, "REPLACE INCOMPATIBLE FLASH ROM FIRMWARE FROM DISK MEDIA ROM FIRMWARE COPY " and related text).

Per claim 19, Howe discloses the method of claim 9 wherein the peripheral device is an optical drive (e.g. FIG. 1 and related text).

Per claim 20, this is the peripheral device version of the claimed method discussed above (Claim 9), wherein all claim limitations have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Howe.

Per claim 21, this is the peripheral device version of the claimed method discussed above (Claim 10), wherein all claim limitations have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Howe.



Per claim 22, this is the peripheral device version of the claimed method discussed above (Claim 11), wherein all claim limitations have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Howe.

Per claim 23, this is the peripheral device version of the claimed method discussed above (Claim 12), wherein all claim limitations have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Howe.

Per claim 24, this is the peripheral device version of the claimed method discussed above (Claim 13), wherein all claim limitations have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Howe.

Per claim 25, this is the peripheral device version of the claimed method discussed above (Claim 14), wherein all claim limitations have been addressed and/or covered in cited areas as set forth above. Thus, accordingly, these claims are also anticipated by Howe.

Per claim 26, Howe discloses the peripheral device of claim 20 wherein if partial content of the second program code does not conform to the predetermined content, the control circuit will cease to replace the first program code with the second program code after the checking module operates an examining process.

Per claim 27, Howe discloses the peripheral device of claim 20 wherein after the checking module ensures that partial content of the second program code conforms to the predetermined content, the control circuit replaces the first program code with the second program code so that the control circuit can execute the second program code to control operations of the peripheral device (e.g. FIG. 3, "COMPATIBLE ?" and related text).

Per claim 28, Howe discloses the peripheral device of claim 20 further comprising a buffer for volatily storing data, wherein the control circuit temporally stores the second program code in the buffer and the checking module operates an examining process after the

Art Unit: 2192

control circuit accesses partial content of the second program code (e.g. FIG. 3, "READ ROM CODE" and related text).

Per claim 29, Howe discloses the peripheral device of claim 28 being applied in an electronic system, the electronic system further comprising a host device, wherein the second program code is transmitted from the host device to the peripheral device (e.g. FIG. 2B and related text).

Per claim 30, Howe discloses the peripheral device of claim 28 further comprising a non-volatile storage memory for non-volatilely storing the first program code (e.g. FIG. 3, "READ ROM CODE" and related text); when the checking module operates the examining process before the first program code is replaced by the second program code, the device inspection step precedes the first program code being erased and the second program code being recorded in the non-volatile storage memory (col. 4: 14-20 "... by erasing EEPROM ... and reprogramming using ..." and col. 3: 55-65 "... compatible with the firmware second portion, stored on ...").

Per claim 31, Howe discloses a method for refreshing at least a program code in an electronic system, the electronic system comprising a host device and a peripheral device, the peripheral device comprising:

- a control circuit for executing a first program code to control operations of the peripheral device according to an instruction from the host device (col. 3: 24-30 "... firmware ... first portion that is resident in flash ROM 53 of FIG. 2A); the method comprising:

- accessing a second program code (col. 3: 55-65 "... firmware second portion, stored on and regularly accessed ..."); and

- executing an inspection step before the second program code replaces the first program code of the peripheral device to generate a corresponding content characteristic according to the second program code and to check whether the corresponding content characteristic conforms to a predetermined characteristic (e.g. FIG. 3, "REPLACE INCOMPATIBLE FLASH ROM FIRMWARE FROM DISK MEDIA ROM FIRMWARE COPY" and related text and in abstract, lines 18-22 "... replaced by firmware first portion stored ..."), the predetermined

Art Unit: 2192

characteristic being not changed when the first program code is replaced by the second program code (e.g. FIG. 3, "COMPATIBLE ?" and related text).

Per claim 32, Howe discloses the method of claim 31 wherein the inspection step is proceeded by the host device (e.g. FIG. 1 and related text).

Per claim 33, Howe discloses the method of claim 31 wherein the inspection step is proceeded by the control circuit of the peripheral device (e.g. FIG. 1 and related text).

Per claim 34, Howe discloses the method of claim 31 wherein the content characteristic is an address where predetermined content is located in the second program code and the predetermined characteristic is a predetermined address (e.g. FIG. 3, "READ ROM CODE" and related text); the inspection step further comprising checking whether the address where the predetermined content is located in the second program code is equal to the predetermined address (e.g. FIG. 3, "COMPATIBLE ?" and related text).

#### ***Conclusion***

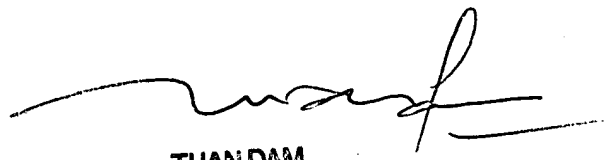
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isaac T. Tecklu whose telephone number is (571) 272-7957. The examiner can normally be reached on M-TH 9:300A - 8:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2192

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Isaac Tecklu  
Art Unit 2192



TUAN DAM  
SUPERVISORY PATENT EXAMINER